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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,102	03/02/2002	Alex G. Zeif	20110/00401	4425

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EXAMINER	
ASSOUAD, PATRICK J	
ART UNIT	**PAPER NUMBER**
2857	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/090,102	ZEIF, ALEX G.	
	Examiner	Art Unit	
	Patrick J. Assouad	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-24 and 34-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18-24 and 34-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 3/2/02 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments and Appeal Brief filed 11/10/05 with respect to claims 18-24 and 34-46 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 18-24 and 34-46 rejected under 35 U.S.C. 103(a) as being unpatentable over Musafia et al.(US 2002/0038235-a1) in view of Nixon et al. (US 2002/0077711 A1).

4. Musafia et al. disclose:

> A production monitoring system collects an array of data related to employee productivity, wages, supply usage, costs, desired profits, overhead, customer information, and other information pertinent to operating a manufacturing operation of service industry. The data is analyzed to derive a variety of productivity values such as average worker efficiency, production incentives, material costs, supply waste, and others. The system audits productivity data entered by workers, and sounds alarms when the data appears to be incorrect. Supply usage rates are calculated and additional supplies are automatically ordered. Estimated prices and delivery times are determined based on historical data and user-supplied safety margins and profit margins. [Abstract, with emphasis added]

5. Figures 1-2 of Musafia et al. are reproduced below.

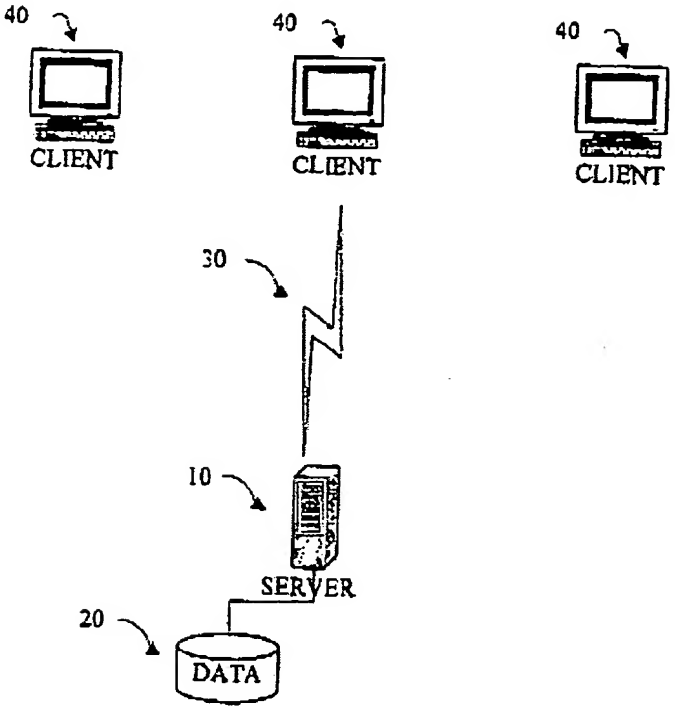


FIG. 1

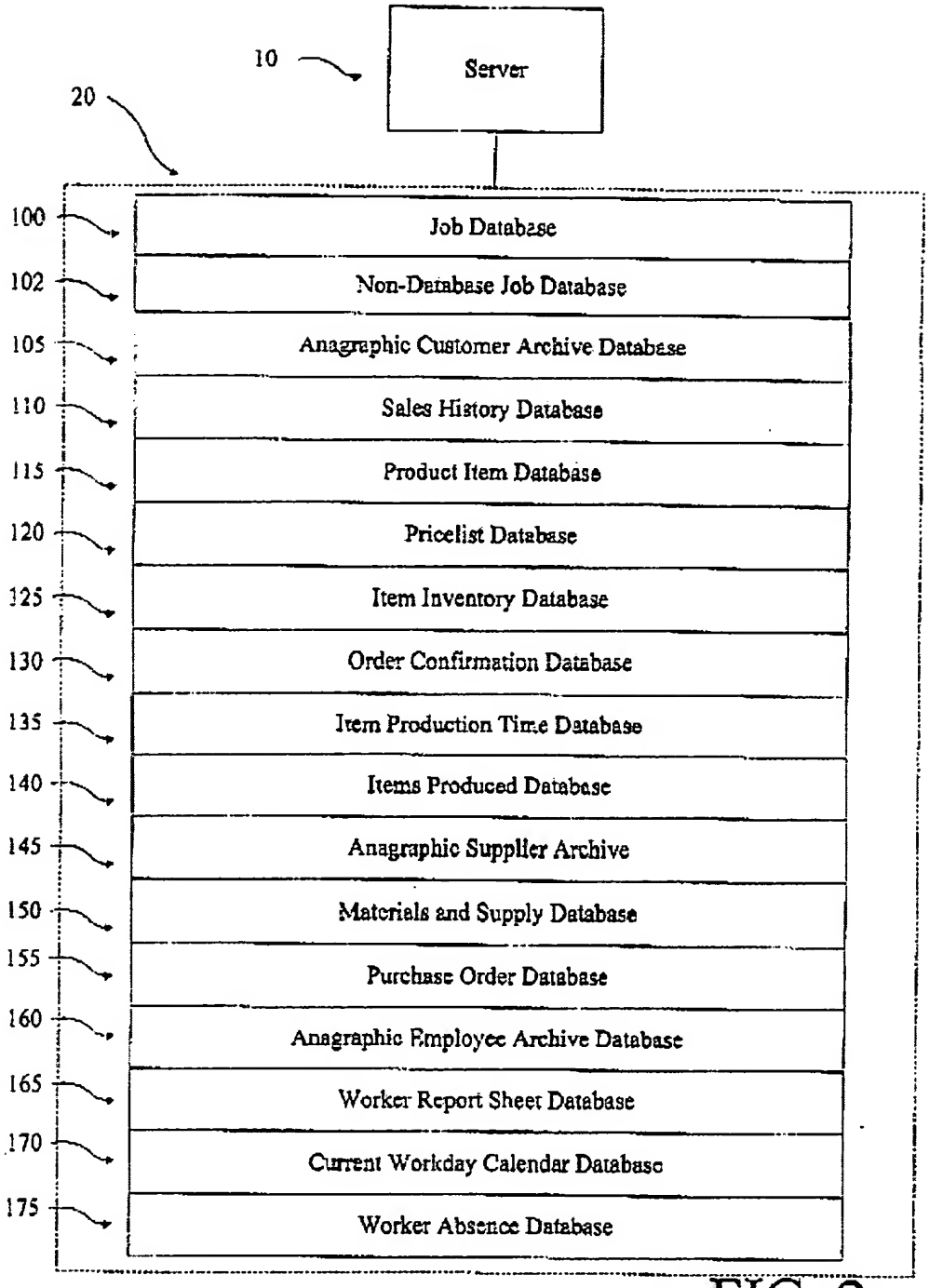

10
Server
20
100
Job Database
102
Non-Database Job Database
105
Anagraphic Customer Archive Database
110
Sales History Database
115
Product Item Database
120
Pricelist Database
125
Item Inventory Database
130
Order Confirmation Database
135
Item Production Time Database
140
Items Produced Database
145
Anagraphic Supplier Archive
150
Materials and Supply Database
155
Purchase Order Database
160
Anagraphic Employee Archive Database
165
Worker Report Sheet Database
170
Current Workday Calendar Database
175
Worker Absence Database

FIG. 2

6. The association between the instant claimed invention (independent claims 18 and 43) and Musafia et al. is as follows:

a) "collecting real time material information from a production line"; see at least the data collected from a production line and then stored in the materials and supply database 150;

b) "analyzing the real time material information to determine a material cost"; see at least the purchase order database which includes materials and supplies and prices and/or the product item database which contains a listing of all materials and supplies necessary to manufacture a production item and/or the materials and supply inventory database which contains inventory and cost information of all materials and supplies required to manufacture a product;

c) "collecting real time operator information from the production line"; see at least the numerous worker-related production data collected from a production line, and then stored in at least worker report sheet database 165;

d) "analyzing the real time operator information to determine an operator cost"; see at least the worker cost of labor parameter or other numerous worker cost parameters;

e) "collecting real time equipment information from the production line"; see at least the supply or equipment-related data collected from a production line and then stored in at least the materials and supply inventory database;

f) "analyzing the real time equipment information to determine an equipment cost" and "collecting real time indirect cost information from the production line"; and "analyzing the real time indirect cost information to determine an indirect cost"; see at least the numerous cost calculations involved in production which include labor, materials, supply, hidden cost corrections, overhead cost expenses, target profit margin parameter, salaries, salary incentives, foreign currency conversions, etc.

g) "determining an actual production cost as a function of the material cost, the operator cost, the equipment cost and the indirect cost"; and "generating cost comparison data as a function of the actual production cost and a scheduled production cost"; see at least the numerous comparison reports of actual versus scheduled production data between different periods, trends, etc.;

l) "generating a productivity report based on the time analyzed operator information and equipment information"; see at least the numerous reports involving operator and equipment information, including the worker productivity reports, individual plant productivity reports, etc.

7. Also most notable from the Summary of the Invention of Musafia et al., with respect to "costs":

> [0010] In accordance with still other aspects of the invention, the use of multiple cost databases, linked to user-determined and computer-determined parameters, permits cost estimates for jobs to be calculated based on a target profit.
>
> [0012] In accordance with still other aspects of the invention, the use of multiple cost databases, linked to user-determined and computer-determined parameters, allows the monitoring of the use of materials and supplies on the production line to determine flawed or inaccurate supplies or wasteful or inaccurately planned manufacturing processes.
>
> [0013] In accordance with yet other aspects of the invention, the system monitors and analyzes item production statistics with the ability to compare current data with historical values and make future projections.
>
> [0014] In accordance with yet other aspects of the invention, the system monitors and analyzes the labor time necessary for all jobs involved in manufacture, identifying production flaws and the cost of the flaws to the production process.
>
> [0015] In accordance with yet other aspects of the invention, the system monitors and analyzes both general plant productivity and each worker's personal productivity with period-to-period comparison, identifying, monitoring, and cost-quantifying inefficiently used labor as well as the incidence of non-productive labor.

8. The difference between the instant claimed invention (independent claims 18 and 43) and that of Musafia et al. lies in the "collecting real time equipment information from the production line" or in other words, in the actual depiction or description of a "production line" and the necessary sensory equipment.

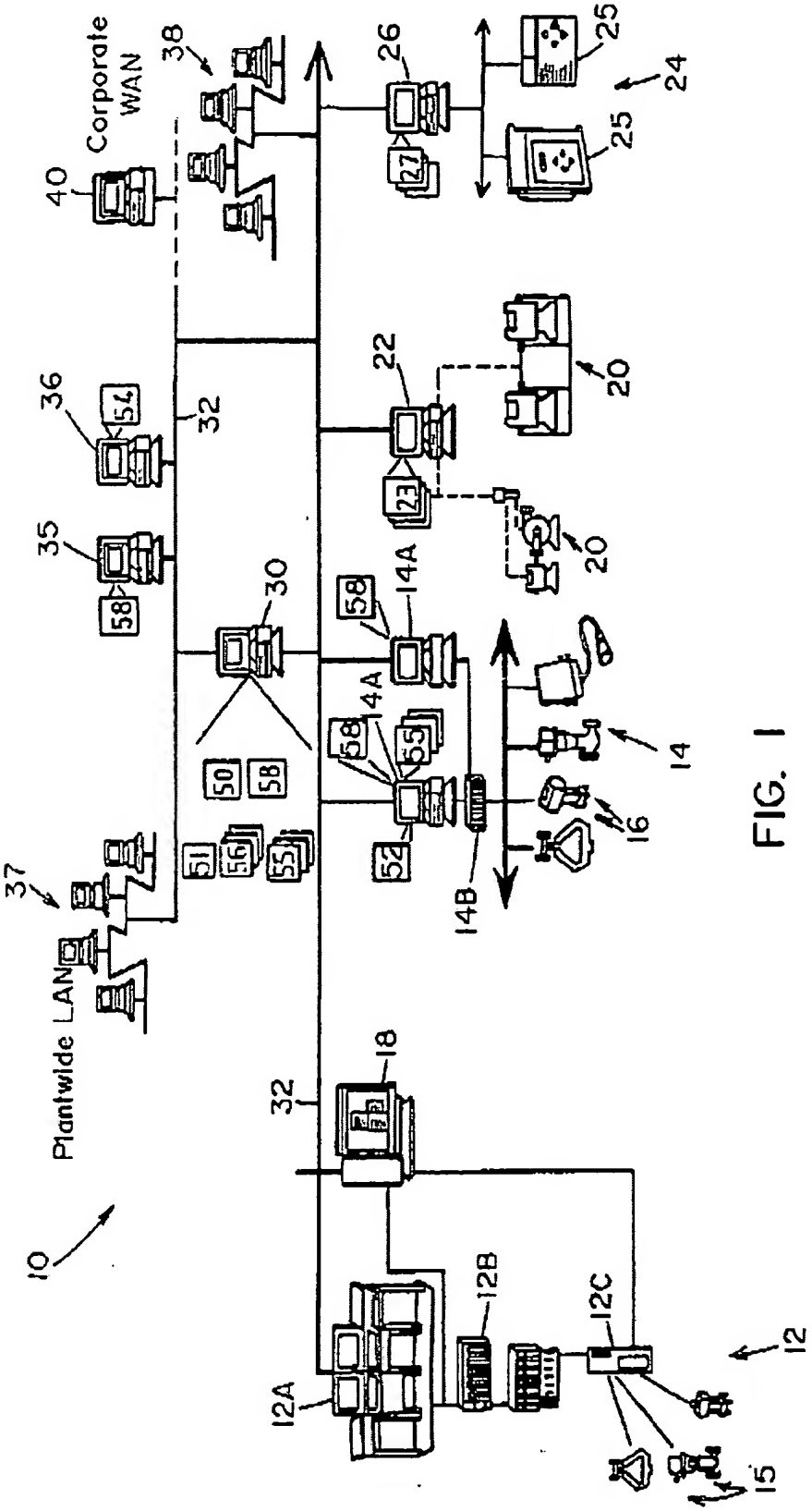
9. Fig. 1 of Musafia et al. shows a block diagram of their productivity monitoring system. All of the production monitoring data is being collected and/or has been collected by various inherent sensory equipment residing within a production line

elsewhere, and this production data is all located in memory 20 connected to server 10 of Fig. 1.

10. Nixon et al. teach the "fusion of process performance monitoring with process equipment monitoring and control" (Title and Abstract). They particularly teach:

> A process control system includes a data collection and distribution system that collects and stores data from different data sources, each of which may use it own proprietary manner of acquiring or generating the data in the first place. The data collection and distribution system then makes the stored data available to other applications associated with or provided in the process control system or to applications associated with the data sources themselves for use in any desired manner. In this manner, applications may use data from vastly different data sources to provide a better view or insight into the current operational status of a plant, to make better or more complete diagnostic or financial decisions regarding the plant, etc. Thus, applications may be provided which combine or use data from previously disparate collection systems such as process control monitoring systems, equipment monitoring systems and process performance models to determine a better overall view or state of a process control plant, to better diagnose problems and to take or recommend actions in production planning and maintenance within the plant. For example, information or data may be collected by maintenance functions pertaining to the health, variability, performance or utilization of a device, loop, unit, etc. This information may then be sent to and displayed to a process operator or maintenance person to inform that person of a current or future problem. This same information may be used by the process operator to correct a current problem within a loop or to change, for example, the plant operating point to account for and to correct for a sub-optimally operating device. The diagnostic applications may generate measurement, control and device indexes pertaining to non-process variables, such as the health of a device. These equipment performance indexes may be determined from models calculating key performance variables, such as efficiency and cost of production. A process control expert may use these measurement, control and device indexes along with process variable data to optimize operation of the process. (Summary, with emphasis added)

11. Fig. 1 of Nixon et al. is reproduced below and is "a block diagram of a process control plant having numerous equipment and process monitoring devices configured to receive and send data to one or more data collection and distribution stations, which may send this data to viewing and diagnostic routines that use the collected data to provide numerous benefits in the process control plant."


Corporate WAN
Plantwide LAN
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12B
12C
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FIG. 1

12. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the acquisition of production and other production-related data in "real-time" as taught by Nixon et al., because as Nixon et al. teach in their Summary:

> Using the disclosed data collection and distribution system, process variable data and non-process variable data may be combined, for example, to generate process models. Likewise, the detection of a device problem, such as one which requires shutdown of the process, may cause business software to automatically order replacement parts or alert the business person that chosen strategic actions will not produce the desired results due to the actual state of the plant. The change of a control strategy performed within the process control function may cause business software to automatically order new or different raw materials. There are, of course, many other types of applications to which the fusion data related to process control, equipment monitoring and performance monitoring data can be an aid by providing different and more complete information about the status of the assets within a process control plant to all areas of the process plant.

Thus, such a combination provides significant improvements in operations and labor management and efficiency and trend-forecasting, in an omnipresent quality and cost-conscious environment .

13. Note that *motivation* may also be explicitly found in the Summary of the Invention of Musafia et al., where we see [with emphasis added]:

> [0003] The provision of a service or the production of a product often includes a number of tasks that must be performed, often in series. Particularly for products and services that are produced in quantity, the effort required to perform the predetermined tasks can be monitored to analyze many factors related to production. Over time, the collection of production data allows the calculation of expected costs, times, and other production aspects. As production continues, current values can be compared with expected values to assess whether individual workers or the system as a whole is progressing efficiently. ..

[0005] The present invention comprises a system and method for monitoring and optimizing product or service output and worker productivity for a business in which products and services are produced in a manner that involves a plurality of tasks and which can include multiple workers involved simultaneously in the manufacture of a single product. Productivity is optimized by the collecting, analyzing, and reporting a variety of data...

[0013] In accordance with yet other aspects of the invention, the system monitors and analyzes item production statistics with the ability to compare current data with historical values and make future projections.

[0014] In accordance with yet other aspects of the invention, the system monitors and analyzes the labor time necessary for all jobs involved in manufacture, identifying production flaws and the cost of the flaws to the production process.

[0015] In accordance with yet other aspects of the invention, the system monitors and analyzes both general plant productivity and each worker's personal productivity with period-to-period comparison, identifying, monitoring, and cost-quantifying inefficiently used labor as well as the incidence of non-productive labor.

14. And most notable is paragraph [0021] of Musafia et al. with emphasis added by the Examiner:

[0021] The linkage of all the above aspects of manufacturing into one management program allows a complete and real time control over profit generation unattainable by standard accounting procedure or by other methods available.

15. As per dependent claims 19-24, and 34-46, which relate to "analysis" and then "comparison" of numerous other production-related data, see at least the numerous types of production and production-related data gathered and extensively processed by Musafia et al. in at least Fig. 2 (reproduced above). Also see the numerous data of Figs. 2-3 of Nixon et al. from a variety of

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Assouad whose telephone number is 571-272-2210. The examiner can normally be reached on Tuesday-Friday, 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J Assouad
Primary Examiner
Art Unit 2857

pja